Ordering number:EN4409

2SA1830 : PNPEpitaxial Planar Silicon Transistor
2SC4734 ; NPN Triple Diffused Planar Silicon Transistor

2SA1830/2SC4734

High-Voltage Driver Applications

Features

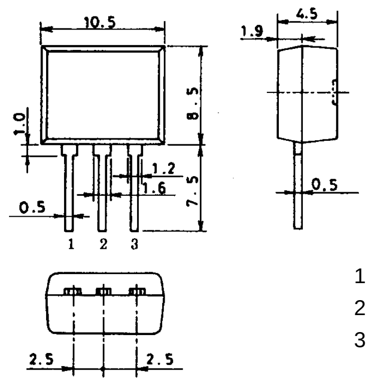
- Large current capacity (I_C=2A).
- High breakdown voltage (V_{CEO}≥400V).
- Possible to offer the 2SA1830/2SC4734 devices in a tape reel packaging, which facilitates automatic insertion.

Package Dimensions

unit:mm

2084A

[2SA1830/2SC4734]



1 : Emitter
2 : Collector
3 : Base

SANYO : FLP

( ) : 2SA1830

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(–)400	V
Collector-to-Emitter Voltage	V_{CEO}		(–)400	V
Emitter-to-Base Voltage	V_{EBO}		(–)5	V
Collector Current	I_C		(–)2	A
Collector Current (Pulse)	I_{CP}		(–)4	A
Collector Dissipation	P_C		1.5	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=(–)300V, I_E=0			(–)1.0	µA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(–)4V, I_C=0			(–)1.0	µA
DC Current Gain	h_{FE}	V_{CE}=(–)10V, I_C=(–)100mA	40*		200*	
Gain-Bandwidth Product	f_T	V_{CE}=(–)10V, I_C=(–)100mA		(40)60		MHz
Output Capacitance	C_{ob}	V_{CB}=(–)30V, f=1MHz		(25)15		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=(–)500mA, I_B=(–)50mA			(–)1.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=(–)500mA, I_B=(–)50mA			(–)1.0	V

* : The 2SA1830/2SC4734 are classified by 100mA h_{FE} as follows :

40 C 80	60 D 120	100 E 200

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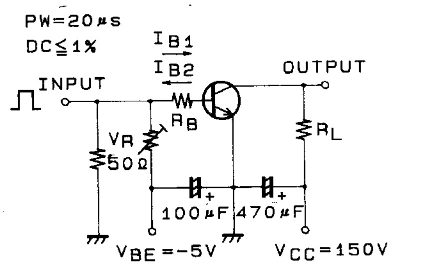
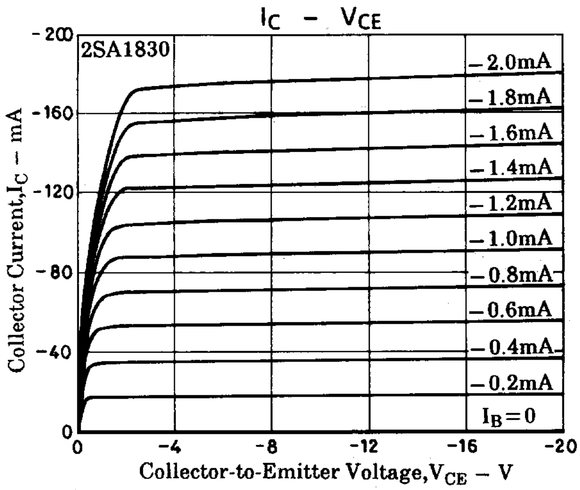
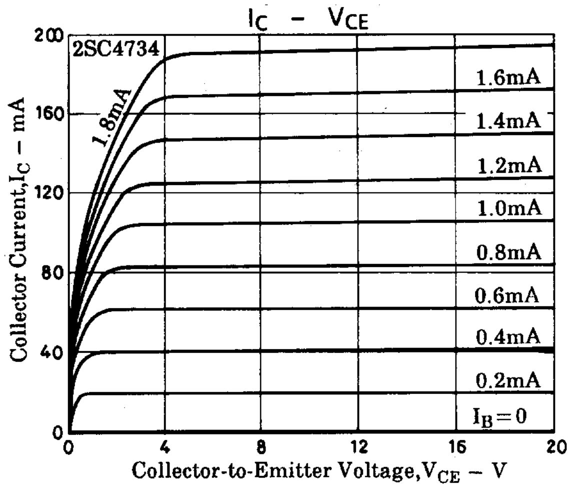
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)10µA, I_E=0	(–)400			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(–)1mA, R_{BE}=∞	(–)400			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=(–)10µA, I_C=0	(–)5			V
Turn-ON Time	t_{on}	See specified Test Circuit		(0.12)		µs
				0.085		µs
Storage Time	t_{stg}	See specified Test CIrcuit		(3.0)		µs
				4.0		µs
Fall Time	t_f	See specified Test Circuit		(0.3)		µs
				0.6		µs

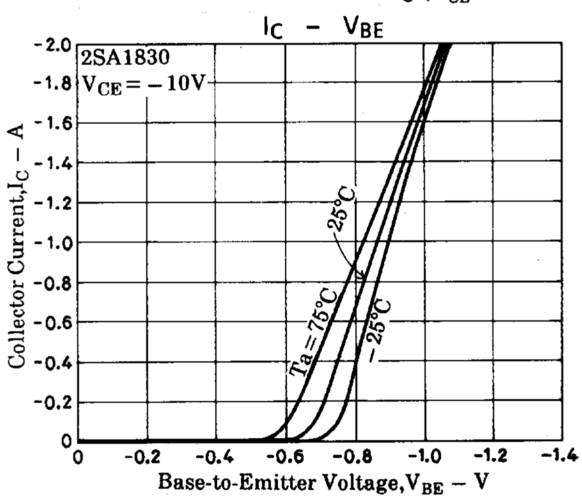
Switching Time Test Circuit

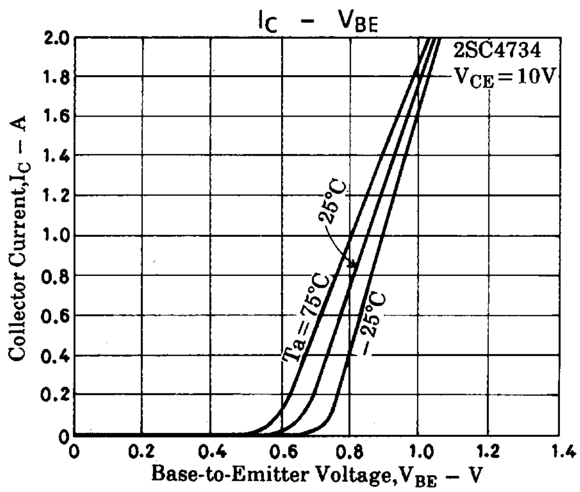


$10I_{B1} = -10I_{B2} = I_C = 500mA$ A01174
$R_L = 300Ω$, $R_B = 20Ω$ at $I_C = 500mA$
For PNP, the polarity is reversed.
(Unit resistance : Ω, capacitacne : F)

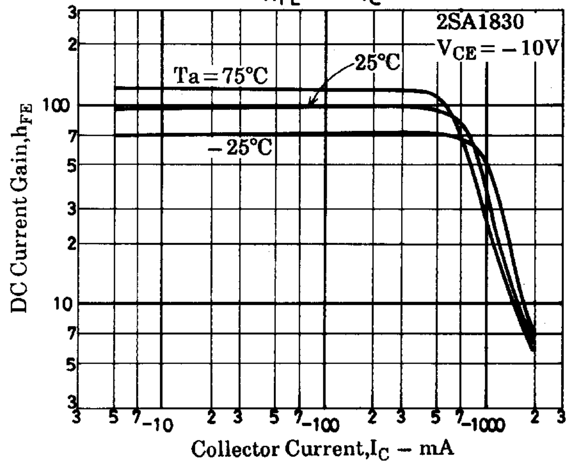




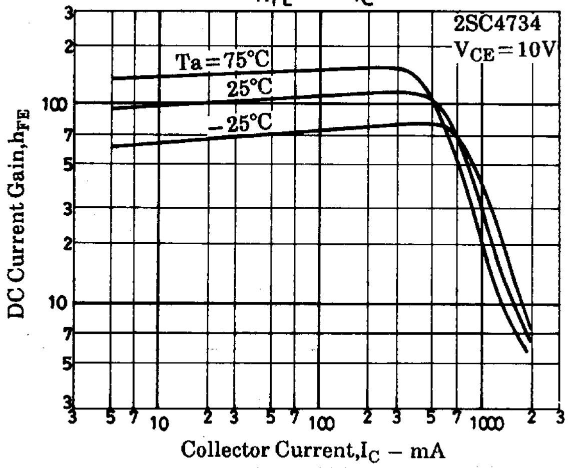




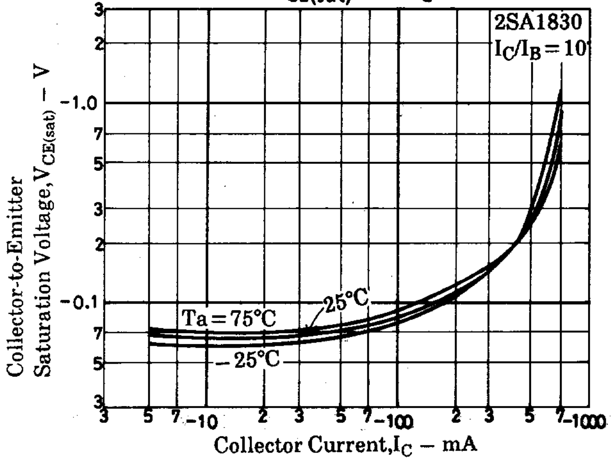
h_{FE} – I_C



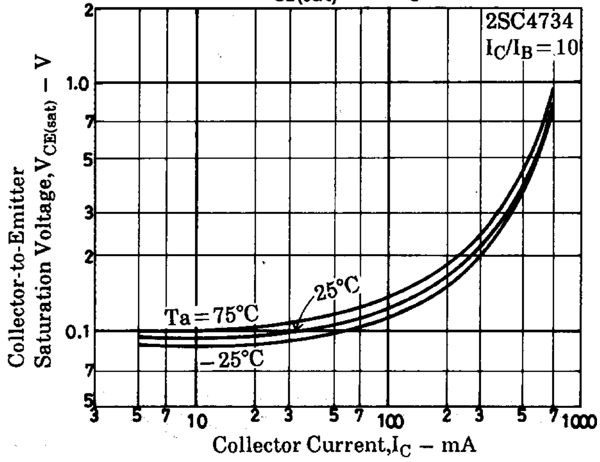
h_{FE} – I_C



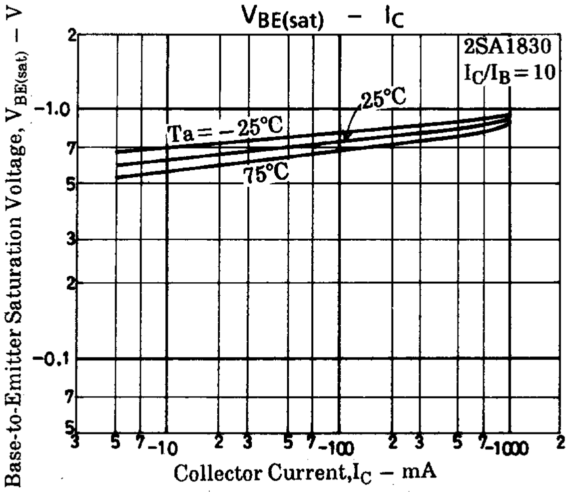
$V_{CE(sat)}$ – I_C



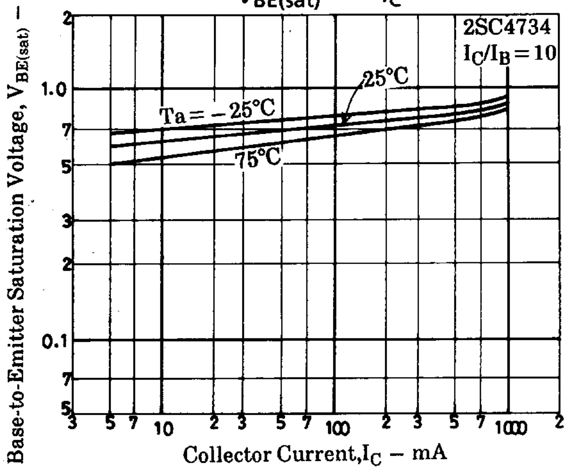
$V_{CE(sat)}$ – I_C



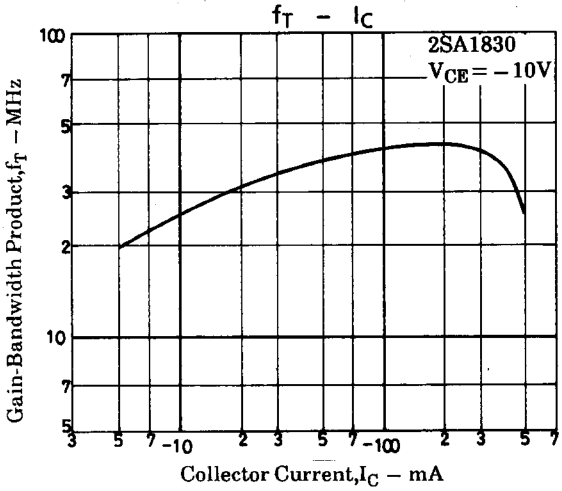
$V_{BE(sat)}$ – I_C



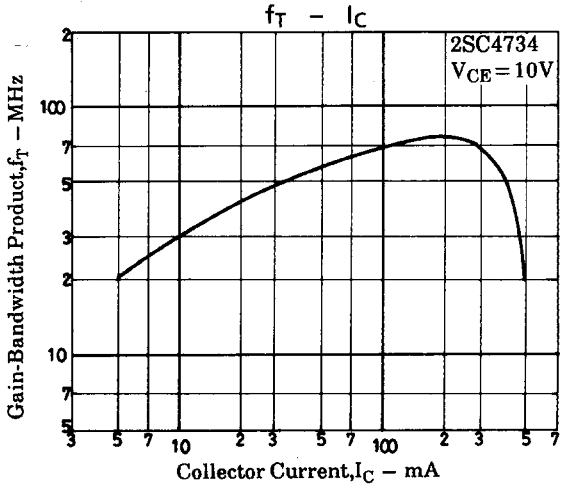
$V_{BE(sat)}$ – I_C



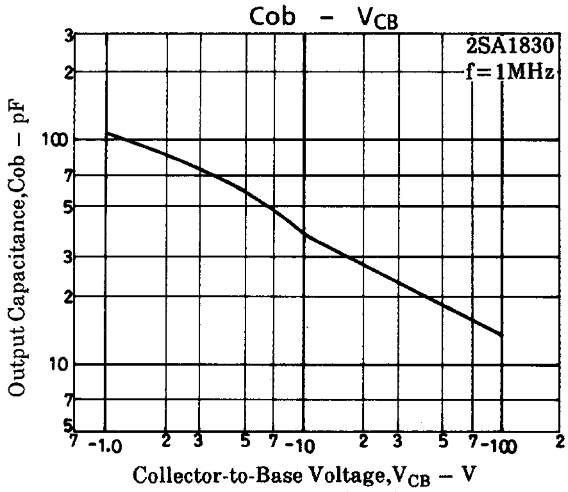
f_T – I_C



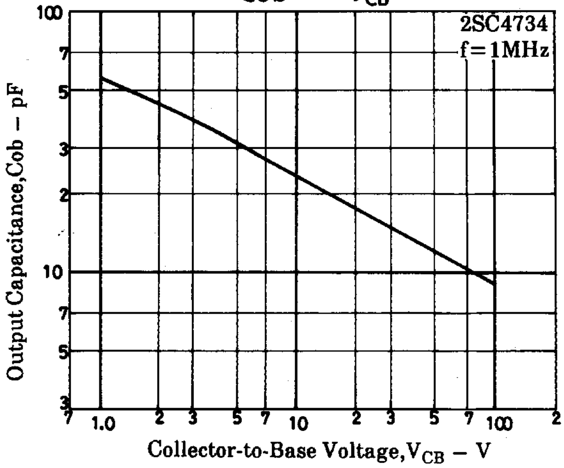
f_T – I_C



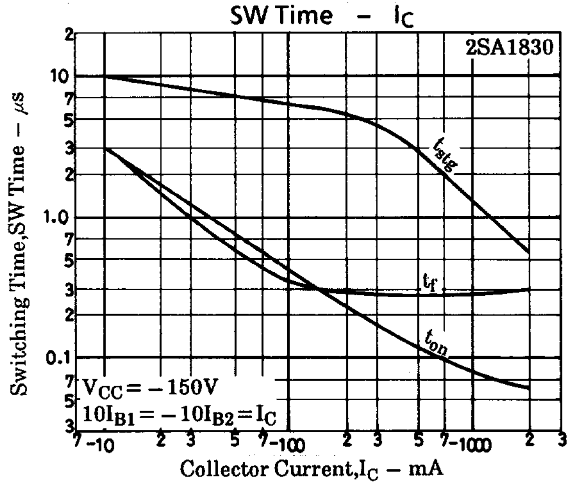
Cob – VCB



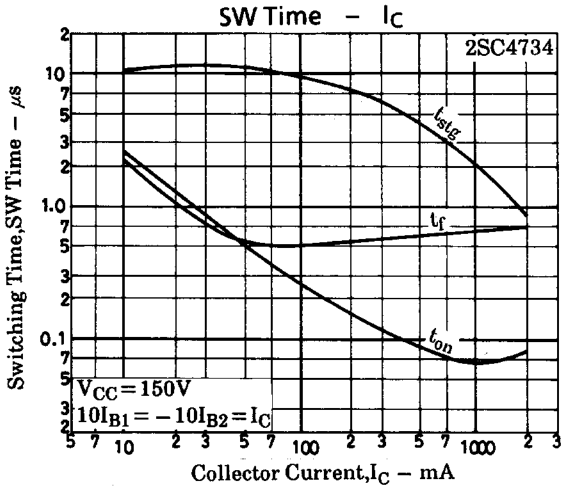
Cob – VCB



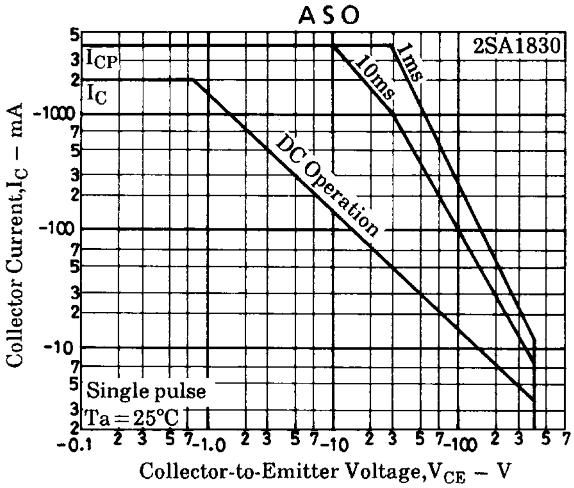
SW Time – IC



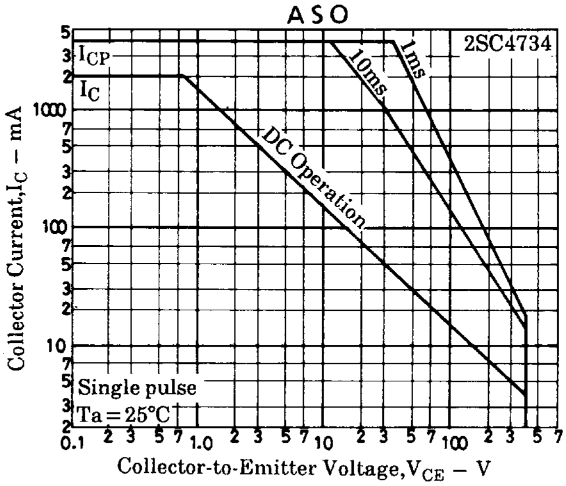
SW Time – IC



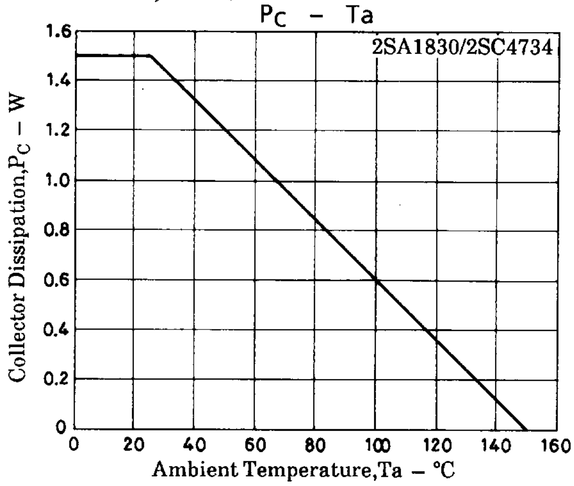
A S O



A S O



PC – Ta



This catalog provides information as of September, 1998. Specifications and information herein are subject to change without notice.